

## The Evening Sky—April 15 to May 15.

BY MRS. L. C. D'A. LIPSCOMB.

### THE MOON.

New, April 19th; first quarter, April 27th; full, May 4th; last quarter, May 11th.

### THE PLANETS.

*Mercury* is an evening star, very well situated for observation during the first week in May, as it is at its greatest distance in the sky from the Sun on the 6th.

*Venus* is an evening star also, in Taurus and then in Gemini. On May 7th, Venus and Mercury are in conjunction, *i.e.*, they are on the same meridian, and will be seen quite near to each other, the more northerly one being Mercury.

*Mars* comes into view this month in Scorpio, near the S.E. horizon. Next month I hope to give a fuller description of him than there is space for in the present number, and he will then be much more distinctly seen, being nearer the meridian.

*Saturn* is in Leo, N. of Regulus, and to the naked eye looks like any other very bright star, but when seen through a telescope, he presents a very unusual appearance; in fact, he is unique so far as our experience of the universe extends; he therefore, arouses keen interest, and much time is spent in trying to obtain a correct knowledge of this planet. Unfortunately, he is a long way off (881 millions of miles from the Sun), and sometimes he is low down in the sky, near the horizon of northern astronomers, when a clear picture of him cannot be obtained on account of the density of our own atmosphere; sometimes, again, he is so near the Sun that we cannot see him distinctly on account of the bright sunlight. Occasionally,

however, we get favourable opportunities of viewing the planet without these obstructions, and then we have a great treat. The thrill that is felt on the first sight of Saturn through a large telescope is a thing never to be forgotten. It is inevitable; although we may know from drawings and photographs what we are going to see, they do not convey the same impression as the thing itself. We notice first of all a round fiery globe with bands across it, especially marked near the equator. Then our attention is attracted to a broad, flat, bright ring surrounding this, which, on closer inspection, turns out to be really two bright rings, and between them and the globe is what looks like a dark gauze veil; finally, in the neighbourhood we can distinguish several satellites, of which there are altogether eight, more than any other planet possesses, so that the Saturnian system is by far the richest in the solar family. To discover the nature of its phenomena would afford more than ample work for a lifetime.

In looking at the globe of Saturn, we must remember we cannot see the solid or fluid body of the planet itself, only the outline of its gaseous atmosphere, for it has not cooled as much as the earth, being nine times as large, and having a diameter of 71,904 miles. Its ordinary colour is white, but a yellowish white, the belts are of greyish white, while some of the darker belts seem greenish. Although Saturn is much further from the Sun than we are, and takes about twenty-nine and a half of our years to make one of his, he rotates much more quickly, and his day and night are together only ten and a quarter hours long.

The rings which surround the globe are evidently circular, but we always see them oval, whether above or below their plane; when nearly in their plane they look like a single straight line, and when exactly in their plane (*i.e.*, when a line drawn across the rings and extended far enough would pass through the earth's centre) they disappear altogether, except in the largest telescopes. The ring is inclined  $27^\circ$  to the plane of the ecliptic (*i.e.*, if a line drawn across the Sun's path among the stars were produced to the planet Saturn, the ring would make an angle of  $27^\circ$  with that line), and as the rings always turn the same side to space, just as our North Pole always points to the Pole Star, it follows that we sometimes see the N. and sometimes the S. side of the ring, while mid-way between each we

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see the ring edgewise, and it practically disappears for ordinary observers. At present we see the S. side of the ring, but it is closing up, and in 1892 the edge will be turned towards the Sun. When we speak of Saturn's Ring, we mean the whole system, but it is divided into three for convenience sake, the outer bright one being known as A, the inner bright one as B, and the dusky one C. There are other sub-divisions, generally known by the names of the astronomers who first observed them. These rings used to be considered solid, then the fluid theory held ground for a time, but the opinion most in favour now is that they are a dense aggregation of small satellites, close together where brightest, and wider apart where more faint. The rings are brighter than the globe, and B is brighter than A, especially near its outer edge, that being the most brilliant part of the Saturnian system, but at its inner edge it shades off into C so gradually as to make the divisions between them almost imperceptible at times. A has several breaks in it apparently, though they are not always visible.

Seven of the eight satellites are almost in the plane of the planet's equator, so that they are always visible to the inhabitants of both hemispheres (should such exist) except when eclipsed by Saturn's shadow. The said inhabitants must possess a magnificent sky, the rings forming splendid arches across the heavens. The nearest satellite, Mimas, can be seen to move with great rapidity, as in two minutes it moves over a space equal to the width of the Moon as seen from the earth, but it is small in size, being only 1000 miles in diameter. From Saturn the Sun would appear to be scarcely more than a third of the size we see him, on account of the distance being so much greater. Saturn was supposed to be the outermost member of the Solar system until about a hundred years ago, and on account of his comparatively slow and lagging pace, was chosen by the ancients as the symbol for lead.

#### FIXED STARS.

*Aquila* is recognised by its three stars in a line almost due north and south, the centre one, Altair, being the brightest.

*Auriga*, in the fanciful delineations of the ancients, is represented as a charioteer holding a goat in his arm, in the body of which is a star of the first magnitude, Capella (goat)

considered by some astronomers to be the brightest star in the northern sky, though others place it second to Sirius.

*Cancer*.—The fine cluster, Praesepe, which can be seen by the naked eye as a milky patch, is the only distinguishable feature in this constellation.

*Canes Venatici* are hunting dogs supposed to be held in a leash by Boötes, and are chasing Ursa Major round the Pole. They contain only one prominent star, but several fine nebulae. One of these is especially interesting. It generally, in even good telescopes, looks like two very uneven nebulae nearly touching one another, in the finest telescopes, however, it is seen to be composed of wreaths of stars combined in a wonderful spiral form.

*Coma Berenice*.—A collection of stars so small, that at a greater distance it would look like a nebula. In the ancient mythology, Berenice had vowed her hair to the goddess Venus; but Jupiter carried it away from the temple in which it was deposited, and made it into a constellation.

*Cygnus*.—One of these stars is most interesting to us, because being a double one, it was the first of all the host of heaven to have the hitherto immeasurable distance between it and the earth measured, and yet it is so far off that the numbers representing the gulf between convey no idea to our minds. Perhaps some little impression as to its distance may be gathered from remembering that the light from the Sun (nearly ninety-three millions of miles away) reaches us in eight minutes, while that from sixty-one Cygni takes nearly six years to travel to us. To think of it is fatiguing!

*Gemini* is very low down and difficult to see, but with a low horizon Castor and Pollux can still be made out.

*Hydra* is a long sinuous constellation, containing nothing of interest to the naked eye. Its head is just under Cancer, a bright star nearly south of Regulus marks its heart, and its tail extends past Crater and Corvus, touching both, until it ends between Virgo and Centaurus.

*Scorpio*.—Antares is a fiery red star, but it is too low down in the horizon to get much attention from northern observers. It has a small green attendant of the seventh magnitude. Half-way between the two brightest stars in this constellation is a nebula, in the middle of which suddenly blazed forth in the middle of May, 1860, a bright star, which had almost faded by



June 16th, and has never distinctly reappeared. It may form part of the nebula itself, or be in a line between it and the Earth.

*The Milky Way* makes a circle round the heavens, and sometimes consists of a broad band, while at others it is divided into two narrower ones. This month it appears stretching across the sky from N. to S.E.



## By the Way—

"How is it possible to get any rest? I am always wanted—the interruptions are so incessant—by the end of the day I am quite used up." We mothers say this already, and when the *Parents' Review* has made us feel still more how great are our responsibilities, shall we feel it less? "If all the world would but agree to know a little less"—a sentiment of a schoolboy which still in these days of progress escapes from us sometimes, at any rate with regard to "doing." We are in danger of being frittered away by the pressure of "small things." But may I mention one small practical experiment to which, more than to any doctor, I believe I owe a rescue from the edge of the precipice. It is very simple. *Tie a handkerchief on the handle of the door.* Why should it be the privilege only of *men* to "sport your oak"? It is the feeling of being always "on duty" which is driving us to despair. But let it once be clearly understood by servants and children that *rest* is the just and rightful claim of the mother, and the signal will be respected. The little pattering feet will trip softly by. The servants will turn and manage for themselves. In a dark, still room the ragged ends of life will be knitted up, and the jagged nerves will recover themselves, and at the next family meal "Mother has had her rest" will be a thought to bring gain and not loss.

M. L. H. D.

The point upon which I would say a few words is one which concerns all thinking mothers.

In small families the feeling of indefinite nervous fear in young children is sometimes stronger than in families of eight or ten.

I have myself the clearest recollection of a certain Sunday night when the old nurse was allowed to go out, and the most reliable female servant—the cook—agreed to sit in the nursery till we fell asleep. There were only two of us in that London nursery—I was five and my younger sister three; she soon fell asleep, but I was haunted all night by the tales the cook told me. She held my little hand in hers, and gently informed me of people who entrapped little children, and killed them, and then their bones were made into castor oil! This old-fashioned medicine had an honoured place in our nurse's cupboard, and in silent trembling I wondered if I should ever be called upon to assist with my bones in dosing other children! The cook was an excellent woman, and thought she was really amusing me.

It is not the really neglected children who suffer most: it is those of a quiet, reticent disposition, who do not easily speak to their best friends, and who, while they are happily cared for in every other respect, feel that they will be *laughed at* if they express a fear.